

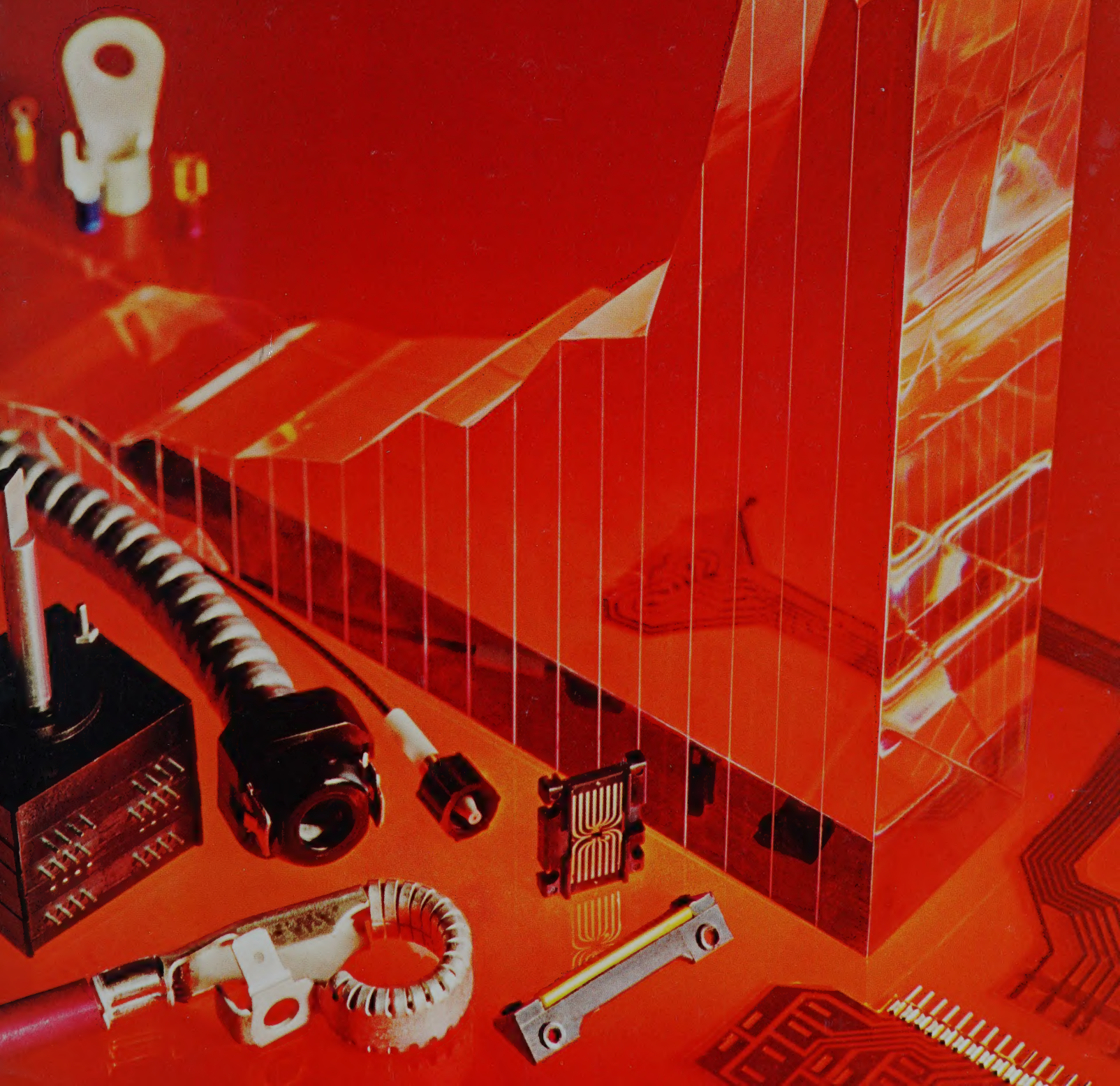
AR53

1976

AMP

INCORPORATED

Pamcor, Inc.



Corporate Profile

35TH ANNIVERSARY 1941-1976

35 Years of Growth Through New Products and New Markets

AMP's growth has been achieved entirely without the benefit of acquisitions. Starting in 1941 with simple terminals and hand crimping tools, we have added tens of thousands of different types and sizes of electrical and electronic connection, switching and programming devices, and other related components. Application tooling now includes high-speed, fully automatic machines. For the past 20 years, sales and earnings have grown at approximately a 15% annual rate. In 1976 sales rose 27% to a record \$522,016,000 and earnings nearly doubled to a record \$1.40 per share from the recession-affected 1975 levels.

Looking ahead to the future, we are confident of our basic approach and the opportunities for continued growth.

General—AMP Incorporated, founded in 1941, has its headquarters in Harrisburg, Pennsylvania. It has a Puerto Rican manufacturing affiliate, Pamcor, Inc., owned by identical shareholders. AMP now has 16 wholly owned operating subsidiaries: domestic subsidiaries in the United States and Canada; and international subsidiaries in Mexico, Argentina, Brazil, Australia, Japan, and nine European countries — Finland, France, Great Britain, Holland, Italy, Spain, Sweden, Switzerland, and West Germany.

Page

1—Letter to Shareholders—Sales up 27% to record \$522.0 million; net income up 93% to record \$52.0 million or \$1.40 per share; fourth quarter sales of \$143.6 million and earnings of 44¢ per share were the best in our history.

2—Highlights and Financial Data—Ten-year financial summary.

3—Financial—At December 31, 1976, assets of \$475.0 million, total debt of \$61.4 million and shareholders' equity of \$284.3 million.

4—Operations—The major portion of AMP's domestic manufacturing facilities are within a fifty-mile radius of its General Offices at Harrisburg, Pennsylvania. Other operating facilities are located in Florida, North Carolina, Virginia, and at the various subsidiary locations. Total worldwide employment at year end was 13,940.

5—Marketing—Throughout the world, AMP products are marketed directly to many thousands of customers for use in the manufacture, maintenance and modernization of the products and equipment of most industries. Over 75,000 customers in widely diversified electrical/electronics markets are served worldwide. (See back cover also.)

Markets—

- 6**—General Electronics & Telecommunications
- 10**—Computer & Office Equipment
- 12**—Consumer Goods
- 14**—Transportation & Electrical Equipment
- 16**—Special Industries — Maintenance, Modernization, Utilities & Construction Fields

18—Products—AMP is one of the leading producers of electrical and electronic connection, switching, and programming devices — including solderless terminals, splices, multiple connectors, coaxial connectors, packaging and interconnection devices, switches, and programming systems — and the application tools and machines to attach these devices to wires, cables, or printed circuitry. It also produces electronic power units and other electrical/electronic components. There are over 50,000 types and sizes of AMP products. In 1976, \$47,000,000 was spent on research, development, and engineering for the creation and application of new and improved products and processes.

22—Financial Statements—All statements and statistics, unless otherwise noted, include AMP Incorporated, its affiliate Pamcor, Inc., and their subsidiaries (all wholly owned).

Corporate Data—Inside back cover.

(Dollars in Millions)



To the Shareholders

- 1976 sales up 27% to a record \$522,000,000 — earnings up 93% to a record \$1.40 per share.
- Fourth quarter sales of \$143,600,000 and earnings of 44¢ were best in our history.
- Net profit margins restored to a more normal 10% of sales.
- Financial position strengthened.
- Capacity utilization improving.
- Good outlook for continued growth.



Mr. J. D. Brenner, President and Chief Executive Officer (right), and Mr. C. J. Fredricksen, Chairman of the Board, reviewing new products.

1976 was a very good year. We passed the half billion mark as sales rose to a record \$522,000,000. Effective cost controls, along with higher sales volume, increased net profit margins from 6.6% of sales for 1975 to 10.0% in 1976. Earnings nearly doubled — rising 93% from the recession-affected 73¢ per share in 1975 to a record \$1.40 in 1976.

Reflecting a more cautious approach, a general tightening up in customer buying practices occurred in the fourth quarter as manufacturers adjusted their inventory levels. As a result, our backlog of unfilled orders was \$98,000,000 at year-end 1976 compared to \$104,000,000 at September 30, 1976. However, the proportion of shorter delivery time orders increased.

Domestic wage rates rose 8% in July, 1976. Wage rate increases by our international subsidiaries were generally in line with their national or industry averages. Employment rose steadily from 12,847 at year-end 1975 to 13,940 at year-end 1976. Most of this increase was in production personnel here and abroad — with the major part of the increase occurring in our domestic operations.

Domestic prices rose 5% on orders received after August 1, 1976. Prices also increased in our international business, generally paralleling industry and national averages — with the timing and amounts varying from country to country.

Our financial position has improved significantly and should continue to strengthen in 1977 — greatly enhancing our ability to finance future growth requirements internally. Capital

expenditures were reduced from \$23,000,000 in 1975 to \$20,000,000 in 1976. With capacity utilization now back to higher levels, capital expenditures should begin rising again — probably to \$30,000,000 to \$40,000,000 in 1977.

Several organizational changes were made during 1976. As previously announced, Mr. Wilson D. Lewis, Chairman of the Board of Dauphin Deposit Bank and Trust Company, filled the vacancy on the Board of Directors created by the death of Mr. Edward M. Green in April, 1976. Mr. Willard A. Smith, formerly Vice President, Manufacturing, is now Vice President, Manufacturing and Product Planning. Mr. John E. Eberle, formerly Divisional Vice President, Connector and Component Products, became Divisional Vice President, Manufacturing. Mr. Kenneth L. Neijstrom, formerly Divisional Vice President, Special Products, assumed the new position of Divisional Vice President, Special Products Development.

After 35 years of fairly steady growth (sales dipped in only 3 years — 1946, 1958 and 1975), we are optimistic about the future. Our growth has been entirely from within, without benefit of acquisitions. In the past 20 years we have grown at approximately a 15% annual rate — a combination of the good progress of our older products and markets, a steady flow of new products, and entry into new markets. We can see no fundamental technological or economic changes occurring that would require any basic change in our strategy or in our confidence in continued growth.

We will continue to concentrate primarily on the connection device field, where the opportunities are as good as ever, while carefully diversifying into logically related

areas — emphasizing highly engineered products and appropriate labor-saving application methods. In 1976 we spent a record \$47,000,000 on research, development and engineering for the creation and application of new and improved products and processes. The spreading use of electrical and electronic equipment in modern societies, and the urgent need to save labor, energy and materials, provide us with an ever-widening range of growth markets to serve.

The rapid recovery of our business supports our belief in the soundness of our basic approach to growth and in the strength of our competitive and technological position. We are truly grateful for the dedication and good work of our employees and the support of our customers and suppliers.

Sincerely,

J. D. Brenner
President and
Chief Executive Officer

C. J. Fredricksen
Chairman of the Board

February 25, 1977
Harrisburg, PA

Highlights and Financial Data⁽¹⁾

AMP Incorporated and Pamcor, Inc. & their subsidiaries

For the Year (\$ in Thousands)	1976	1975	1974	1973	1972	1971	1970	1969	1968	1967
Net Sales	\$522,016	\$409,551	\$482,107	\$417,960	\$302,086	\$239,648	\$225,827	\$211,256	\$167,172	\$146,469
Gross Income	212,173	150,340	194,343	179,734	133,212	100,818	98,820	94,585	71,265	60,594
Income From Operations	102,515	59,876	98,578	93,578	66,776	46,318	46,051	47,702	32,052	25,112
Interest Expense	(7,711)	(9,550)	(12,004)	(3,171)	(1,940)	(2,549)	(2,385)	(1,908)	(1,587)	(1,502)
Other Income, Net	2,746	1,775	3,291	2,230	889	1,488	1,222	1,528	549	87
Income Before Income Taxes	97,550	52,101	89,865	92,637	65,725	45,257	44,888	47,322	31,014	23,697
Income Taxes	45,510	25,100	44,418	45,390	31,719	21,084	20,344	23,097	15,082	9,749
Net Income	\$ 52,040	\$ 27,001	\$ 45,447	\$ 47,247	\$ 34,006	\$ 24,173	\$ 24,544	\$ 24,225	\$ 15,932	\$ 13,948
Net Income Per Share ⁽²⁾	\$1.40	73¢	\$1.23	\$1.28	92¢	66¢	67¢	66¢	43¢	38¢
Cash Dividends	\$ 15,198	\$ 13,712	\$ 12,209	\$ 9,148	\$ 8,179	\$ 7,859	\$ 7,110	\$ 5,875	\$ 4,887	\$ 4,391
Cash Dividends Per Share ⁽²⁾	41¢	37¢	33¢	24 3/4 ¢	22 7/8 ¢	21 1/2 ¢	19 1/2 ¢	16¢	13 1/2 ¢	12¢
Capital Expenditures	20,240	23,128	59,174	53,277	23,536	15,034	23,271	17,562	8,465	15,977
Depreciation	23,987	21,740	16,805	13,128	11,655	11,451	10,361	9,452	8,497	6,966
Research, Development and Engineering	\$ 47,000	\$ 39,000	\$ 46,000	\$ 42,000	\$ 30,000	\$ 24,000	\$ 23,000	\$ 21,000	\$ 17,000	\$ 17,000

At December 31 (\$ in Thousands)

Working Capital	\$197,219	\$151,195	\$105,124	\$104,574	\$102,530	\$ 85,622	\$ 71,807	\$ 65,768	\$ 56,390	\$ 46,317
Property, Plant and Equipment, Net	149,418	157,827	158,216	117,559	78,802	68,439	65,614	53,379	46,086	47,068
Long-Term Debt	40,056	42,510	16,521	12,637	12,192	12,603	12,346	11,537	13,535	15,534
Total Debt	61,445	70,554	94,969	56,773	21,377	22,176	23,627	20,314	19,830	20,498
Shareholders' Equity	284,323	250,911	236,610	202,351	163,259	137,433	121,409	103,976	85,597	74,036
Number of Employees	13,940	12,847	13,537	14,830	11,585	10,306	10,426	10,171	8,785	8,260
Backlog	\$ 98,000	\$ 73,000	\$ 87,000	\$ 99,000	\$ 58,000	\$ 42,900	\$ 43,300	\$ 41,100	\$ 34,500	\$ 29,000
Shares of Stock Outstanding ⁽²⁾ (Thousands)	36,990	37,091	37,025	36,977	36,937	36,868	36,805	36,755	36,677	36,619

Annual Stock Price Range⁽³⁾

High	35 5/8	40 7/8	45 1/4	52 7/8	44	24 3/8	19 5/8	19 5/8	13 1/8	14 1/2
Low	26	23 1/8	20 3/8	35 3/4	22 7/8	18	13 3/8	10 7/8	9 1/2	9 1/2

(1) For further information see Notes to Combined Financial Statements. 1975 and prior years restated to reflect effects of Financial Accounting Standard No. 8 on foreign currency translation methods.

(2) Per share data based on weighted average shares outstanding. Shares outstanding are adjusted to retroactively give effect to stock splits of 3-for-1 in 1973 and 2-for-1 in 1967.

(3) 1976-1975 Quarterly High-Low Price Range:

	1976	1975
1st Q.	33 7/8 - 26	36 1/4 - 23 1/8
2nd Q.	35 5/8 - 30 5/8	40 7/8 - 29 1/2
3rd Q.	35 5/8 - 31 3/4	37 3/4 - 27 3/4
4th Q.	35 - 26 3/8	30 3/4 - 26 1/8

Prices are adjusted retroactively for stock splits.

Financial

- **Total debt declined by \$9,000,000 in 1976, while cash and marketable securities increased by \$44,000,000.**
- **Dividends increased by 11% in 1976, with a 17% increase indicated for 1977.**
- **Shareholders' Equity increased 13% to \$284,000,000.**

How the Sales Dollar was used

	1976	1975
Wages, salaries and employee benefits	39.7%	41.8%
Materials and services, etc.	34.3%	37.0%
Depreciation	4.6%	5.3%
Interest expense	1.5%	2.3%
Federal, state, foreign and local taxes	10.0%	7.0%
Cash dividends	2.9%	3.3%
Reinvestment in the business	7.0%	3.3%
	100%	100%

AMP's financial position strengthened further during 1976. Working capital increased by \$46,000,000 to \$197,200,000 and the current ratio improved slightly to 2.6-to-1 at the end of 1976 compared to 2.5-to-1 at the end of 1975.

Cash and marketable securities increased by \$44,200,000 in 1976 to \$98,200,000 while total debt, both short- and long-term, declined by \$9,100,000 to \$61,400,000 at year-end 1976 — equivalent to 22% of Shareholders' Equity of \$284,300,000. Of the total debt of \$61,400,000, our international operations accounted for \$34,900,000 — nearly all of which represents local currency obligations.

Inventories increased only 5% during the year, despite a 27% increase in sales, and ended the year at \$115,000,000 compared to \$109,000,000 at year-end 1975. As a result of the reduction in total debt, total interest expense dropped to \$7,711,000 in 1976 compared to \$9,550,000 in 1975. The Other Income category increased to \$2,746,000 in 1976 from \$1,775,000 in 1975 because of increased investment income.

Capital Expenditures were reduced further in 1976 to \$20,240,000 compared to \$23,128,000 in 1975, \$59,174,000 in 1974, and \$53,277,000 in 1973. Depreciation rose to \$23,987,000 in 1976 from \$21,740,000 in 1975. Capital expenditures are expected to rise in 1977 — probably reaching the \$30,000,000-\$40,000,000 range.

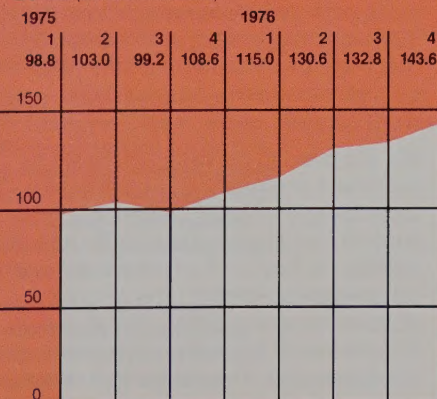
Dividends — The quarterly dividend rate was increased 17% to 12¢ per AMP Endorsed Share payable March 1, 1977, to shareholders of record February 7, 1977. This indicates an annual rate of 48¢ per share compared to 41¢ per share in 1976 and 37¢ per share in 1975. This is the 24th consecutive increase. For the past 18 years, except in 1972 when limited by government controls, the dividend has increased more than 10% each year.

In 1976 Pamcor, AMP's Puerto Rican affiliate, resumed paying a portion of the total combined dividends (5¢ of the 10¼¢ paid December 1, 1976). Although the March 1, 1977 dividend is being paid entirely by AMP, it is anticipated that a Pamcor dividend will be paid later this year.

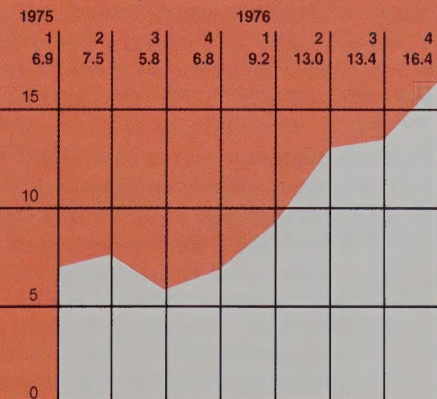
Foreign Currency Translation — As computed under the Financial Accounting Standards Board Statement No. 8, the total cumulative quantifiable effect of foreign currency rate changes was, as previously reported, a decrease in net income of approximately 9¢ per share in 1976 and 2¢ per share in 1975. Compared to the translation method previously used, FASB No. 8 caused some quarterly earnings fluctuations; however, earnings as reported for the entire year 1976 are only 5¢ per share less than they would have been under the prior method.

Quarterly Data, 1975-1976

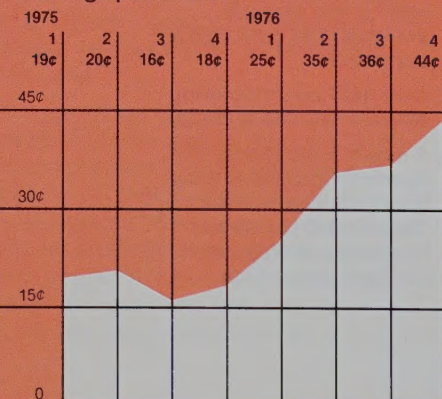
Sales (Dollars in Millions)



Net Income (Dollars in Millions)



Earnings per Share



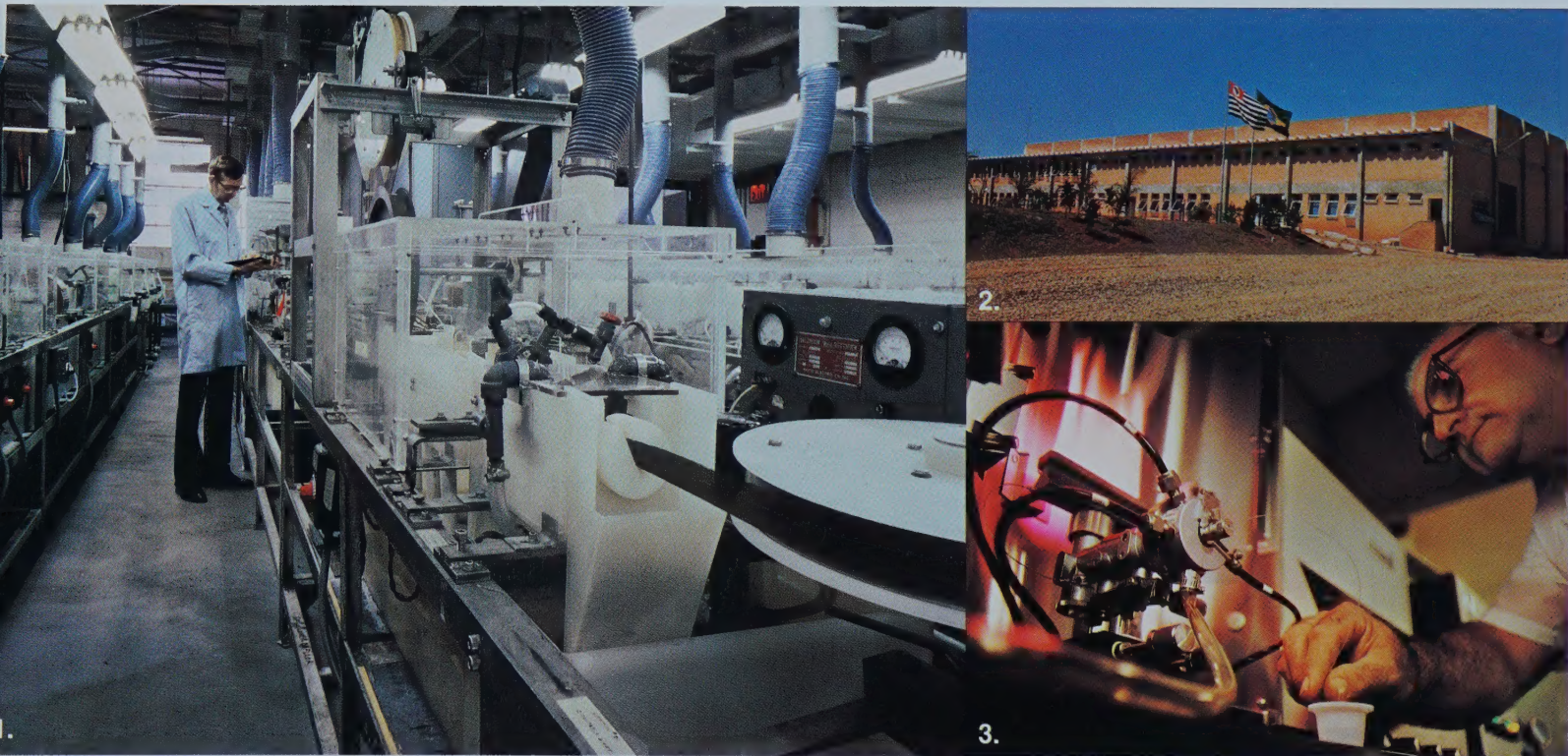
Operations

- Employment rose nearly 1,100 to 13,940 at year-end 1976 from 12,847 at year-end 1975.
- Capital expenditures continued at a relatively low level of \$20,240,000 in 1976 but should increase in 1977.
- Rising capacity utilization is benefiting operating margins.
- Floor space held steady at nearly 5,000,000 sq. ft.

From a low of 12,500 in the first quarter of 1975, employment rose 12% to 13,940 at year-end 1976. During that same period, quarterly sales increased 45% from a low of \$98,766,000 to a record \$143,557,000 in the fourth quarter of 1976. Most of the employment increase was in manufacturing personnel — primarily in domestic operations. Domestic wage rates increased 8% in July, 1976. Rate increases overseas again generally paralleled various national and industry averages.

production and technical capabilities. Now with capacity utilization back to more normal levels and sales expected to increase further this year, expenditures should begin to rise again — probably to \$30,000,000-\$40,000,000.

We continue to strengthen our basic manufacturing capabilities in high-speed metal forming, metal plating, plastic molding, and rapid assembly of small parts. Broader, more sophisticated production capabilities, such as the automated metal plating line shown here,



1. A fully automated metal plating line recently designed and built by AMP personnel.
2. New AMP manufacturing plant at São Paulo, Brazil.
3. A new atomic absorption spectrophotometer in our Materials Engineering Department can detect impurities of only a few particles per million.

The steady rise in sales in the last five quarters has improved our capacity utilization significantly. This, along with effective cost controls, has restored operating margins to relatively normal levels.

Capital expenditures were reduced to \$20,240,000 in 1976 from \$23,128,000 in 1975. Expenditures in 1976 were primarily for equipment to increase our

are a vital factor as our products become more complex, production volumes increase, wage rates push upward, materials become more costly, and more stringent customer requirements must be met.

We are placing growing emphasis on materials engineering — laying an increasingly strong foundation for our work in metals and plastics through the addition of specialized personnel and advanced equipment. The atomic absorption spectrophotometer shown here is one of a number of new pieces of equipment recently added in this area.

Marketing

- Nearly 1,200 field sales and field service personnel.
- 2,000 people involved in total marketing efforts.
- Nearly 50 sales offices throughout the world.
- Over 37,000 application machines with customers.

Sales are divided into the five very broad, fairly equal size categories shown on the following pages. In 1976 there was good growth in all five categories, with gains generally much stronger in our domestic markets. Our growth was strongest in the Computer and Office Equipment category, followed in order by the Consumer Goods, General Electronics & Telecommunications, Transportation & Electrical Equipment, and Special Industries categories. It was not surprising that the Special Industries

Our rapid recovery in sales has reconfirmed our confidence in our basic marketing approach and the competitive viability of AMP products. While continuing to rely on our own direct selling organizations to reach most of our markets, we are steadily expanding our list of electrical and electronics distributors and national retail firms. More than 150 distributors were added in 1976 for a total of over 300. Although our sales volume in this area may not be significant for years, the unique



1.



3.



2.

1. Recent sales engineering trainees receiving instruction on AMP application machines.
2. A new publication series, the AMP Designer Digest, along with recent issues of the U.S. and Japanese versions of the AMP NEWS publication, and the 1,692-page 1976 edition of the AMP Engineering and Purchasing Guide.
3. New point-of-sale display for electronics distributors offers AMP products for the installation and repair of CB radios.

category recovered at a more modest rate. Essentially comprised of non-manufacturing customers, this category has been less volatile in both recession and recovery periods — resulting in a similar, but steadier, long-term growth rate.

These markets are becoming more complex each year. The relentless push of electronics into new areas — displacing mechanical and electro-mechanical systems and creating entirely new types of equipment — and the drive for lower costs and higher reliability, provide us with excellent marketing opportunities.

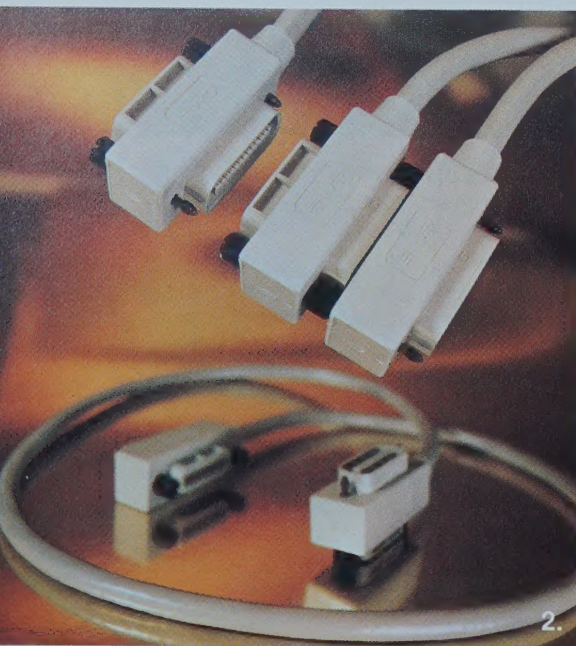
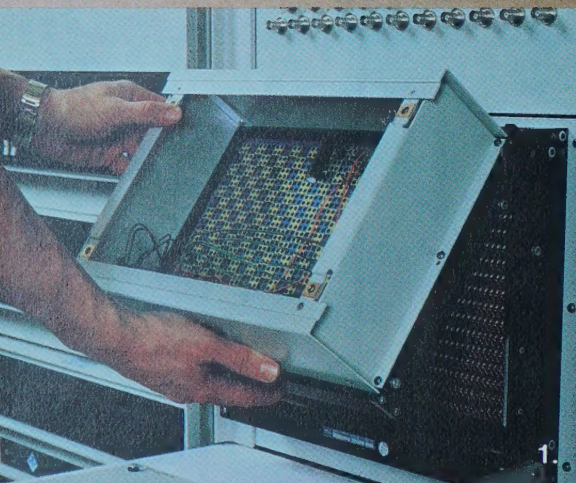
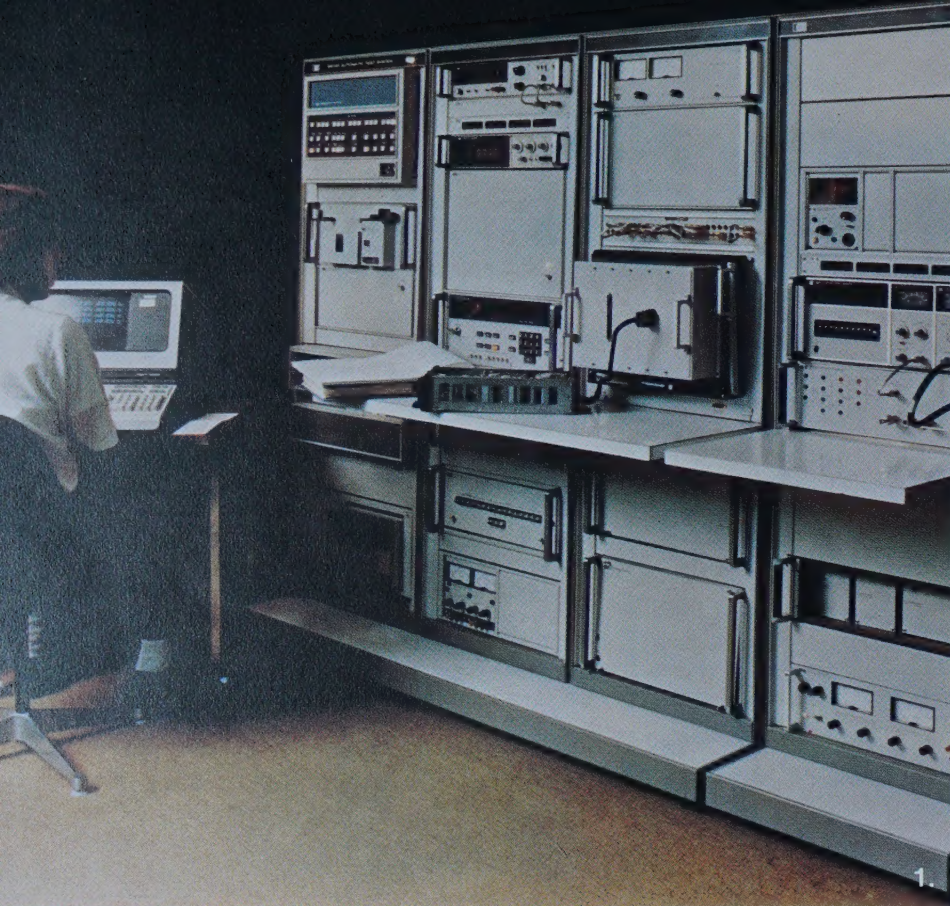
capabilities of distributors are permitting AMP products to become available in markets we could not otherwise reach effectively.

AMP application machines placed with customers rose by more than 1,000 to a new high of over 37,000. A number of new types of tools and machines were created during 1976 — a vital part of our basic marketing approach of providing customers with lower installed costs through the use of appropriate labor-saving AMP application tooling.

AMP Markets

General Electronics — With instruments steadily becoming more complex and finding new fields of use, the instrumentation market has traditionally been a good growth area for us. One area of rising interest is automatic test equipment which permits extensive test sequences to be run quickly and accurately. The Hewlett-Packard equipment shown here uses an AMP patchcord programming system, with removable front patchboards, to quickly change from one test program to another. Created in the 1950's for programming of early computers, AMP patchcord programming systems continue to find new applications more than twenty years later.

Widely used in the telecommunications field, our CHAMP connectors also appear



1. Hewlett-Packard automatic test equipment uses AMP patchcord programming systems with pre-programmed, removable patchboards to quickly change from one test sequence to another.
2. A "stacking" version of the AMP CHAMP connector is becoming a standardized interface bussing connector in the instrumentation industry.
3. Toledo Scale electronic weighing equipment uses a number of different AMP product families.
4. Recent AMP multi-layer panels for aerospace and military electronic equipment.
5. Entronic Corporation's Vigilante smoke and fire alarm uses an AMP MATE-N-LOK connector to facilitate installation and servicing.
6. The CB radio industry uses a variety of AMP terminals, connectors and switches — some specially developed for this field — on the radio, microphone, and antenna.



General Electronics and Telecommunications

Avionics • Military Electronics • Production Control Systems • Machine and Process Controls
Instrumentation • Test Equipment • Medical Equipment • Scientific Equipment
Communications Equipment • Educational and Recreational Equipment
Security Systems • Point-of-Sale Systems • Quotation Systems

in the instrumentation industry in the new "stackable" version shown here. Permitting a number of cables to be plugged into a single source, they are becoming a standardized interface bussing connector.

The Toledo Scale weighing equipment shown here is a good example of the steady displacement of electro-mechanical systems by electronics in many industries throughout the world. With electronics comes increased equipment capabilities in weighing, computing, displaying, printing, etc. — and the need for many AMP products.

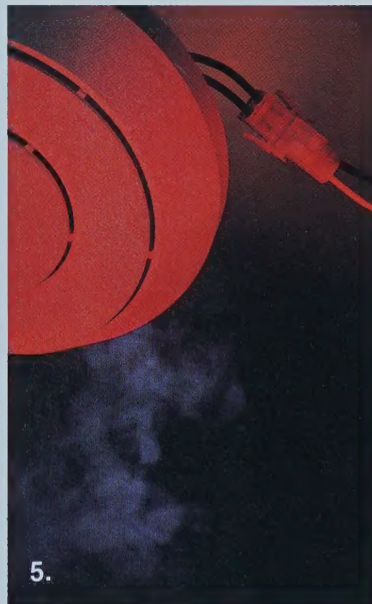
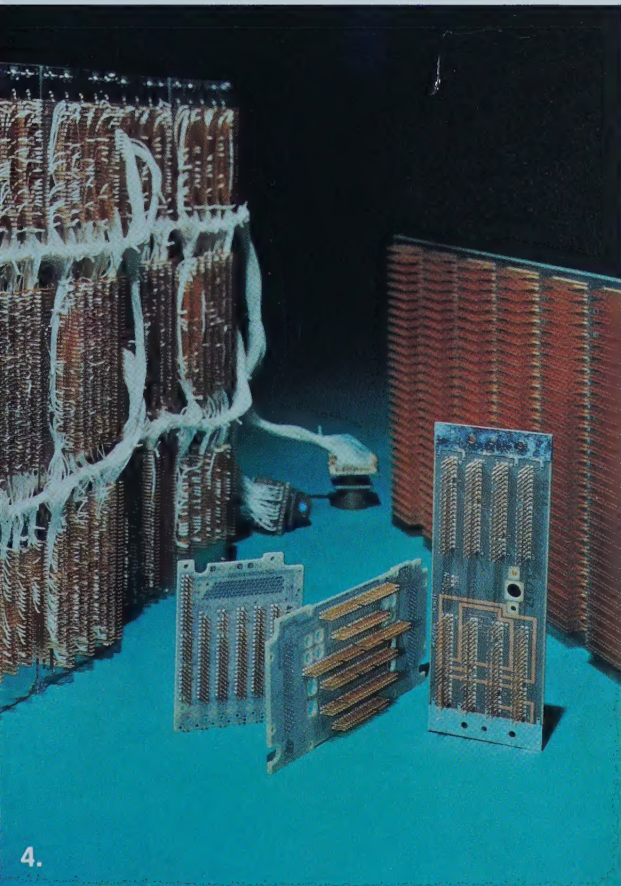
Our Aerospace and Military business is now only a modest part of our total sales (approximately 5%). After a period of gradually declining sales in the late 1960's and early 1970's, sales have turned upward. The outlook for continued

growth is good, with AMP products specified in all major programs. The multi-layer panels shown here are for F-15 avionics and shipboard radar systems.

Sales of smoke and fire detectors are rising rapidly. The Entronc Corporation's Vigilante unit shown here uses an AMP two-position MATE-N-LOK connector to facilitate connection to the household wiring system. With a broad array of new devices being created, the entire field of security systems offers a good potential for many types of AMP products.

When the dramatic upturn in the sales of CB radios began three years ago, we first turned our attention to developing special solderless, crimpable coaxial connectors

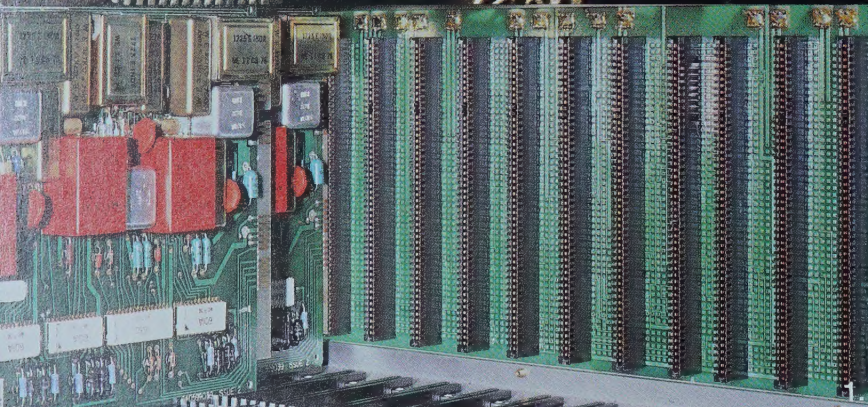
for easy attachment of the antenna. This led to a growing involvement with the leading producers. Today we have a variety of terminals, splices, connectors and switches being used on the radio, microphone and the antenna — a mixture of standard and special products. We are optimistic about the prospects for further growth in this area, not only because of the growing popularity of CB radios, but also from the steady "upgrading" of this equipment that is expected to occur in the coming years.





1.

1. Dozens of AMP ECONOMATE connectors are used in the desk console and equipment rack of the Bell System's new DIMENSION PBX all-electronic customer switching system manufactured by Western Electric.

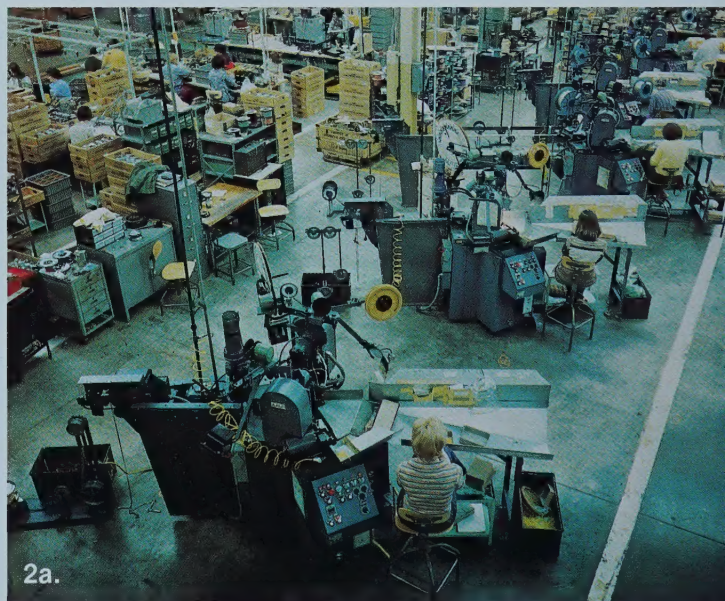


2. AMP products and application machines are used extensively in the Huntsville, Alabama, plant of GTE Automatic Electric, a major producer of telephone equipment —

- a. Fully automatic AMPOMATOR machines terminate many thousands of wires per hour.
- b. Computer-controlled AMP machine inserts thousands of AMP contacts per hour into printed circuit boards.



1.



2a.

- c. CHAMPOMATIC machines apply CHAMP connectors to one end of telephone cable assemblies.
- d. AMP-O-LECTRIC machines apply thousands of terminals per hour on one end of telephone cable assemblies.
- e. AMP wire terminals, printed circuit board contacts, and a CHAMP cable connector.

General Electronics and Telecommunications

Telecommunications — After stalling temporarily during the recent recession, the telecommunications industry has resumed its vigorous growth. In 1976 we participated in this growth both here and abroad.

We continue to pursue a dual approach to this broad market. Our initial efforts centered on developing special products to solve connection problems unique to this field. Examples of this are our PICABOND splices and tools for telephone transmission cables, CHAMP connectors and application tooling for 25-pair cables, dropwire splices for service wires, and circuit concentration panels for central office equipment. We are expanding these product lines and developing other special products.

We are also finding many opportunities to extend standard AMP products and application tooling already in successful

use in other fields to meet similar requirements in the telecommunications industry. This is particularly evident with the growing role of solid-state electronics in communications equipment.

One example of this activity is the extensive use of AMP ECONOMATE panel connectors in the Bell System's versatile, new, all-electronic DIMENSION PBX equipment. In addition to meeting the industry's stringent product performance requirements, these AMP connectors reduce assembly costs and facilitate field servicing.

Another example is the use by GTE Automatic Electric of AMP application equipment — such as AMP-O-LECTRIC and AMPOMATOR termination machines and computer-controlled contact

insertion machines. AMP application tooling now has an important role in their production of telephone handsets.

These examples are indicative of the broad potential that is arising throughout the world for the transfer of established AMP products and application machines into new uses because of the steady advancement in communications equipment design and the ever-greater need for labor savings. This potential, along with our proven ability to develop special telecommunications products, makes us very optimistic about our long-term growth prospects in this market.

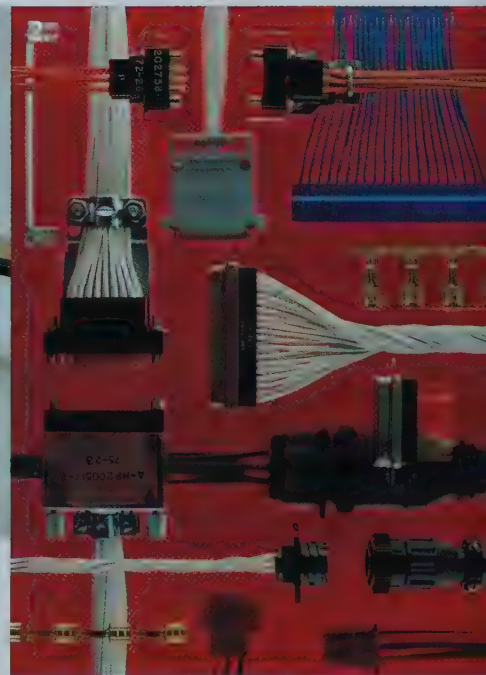




1. New AMP Zero Insertion Force inter-card connectors provide the connections between circuit boards in NCR equipment under development — thus eliminating the need for back panels. Permitting easy expansion of the basic system by plugging in additional boards when needed, this new interconnection technique gives NCR much greater design flexibility and cost effectiveness.
2. IBM business computers such as Systems 32, 35, and 5100 use a variety of standard and special AMP connectors.



3. Data 100 KEYBATCH and DFE Alpha 128 data terminals use a variety of AMP products. The German-made DFE terminal (below) shows AMP FFC connectors on the flexible flat cable and AMP HD connectors on the external cables.
4. Field installation of Lanier dictating equipment is facilitated by CHAMP connectors and wiring tools.



Computer and Office Equipment

Digital Computers • Analog Computers • Hybrid Computers
Data Entry Equipment • Printers • Data Converters
Input/Output Terminals • Time-Sharing Equipment
Visual Displays • Office Equipment • Business Machines

Our sales to this market category have recovered rapidly from the 1975 recession lows — with the recovery much stronger in our domestic markets.

The computer industry is particularly important in AMP's technical efforts. Products developed for this fast changing market are often transferable later to other markets. Recognizing the long lead times and advanced technology of this industry, we have given increased attention in recent years to becoming involved at the earliest possible stages in a customer's design. A number of new products have resulted. A good example is the new AMP interconnection system shown here in NCR equipment under development. These ZIF (Zero Insertion Force) inter-card connectors eliminate

the need for back panels and give greater design flexibility and cost effectiveness.

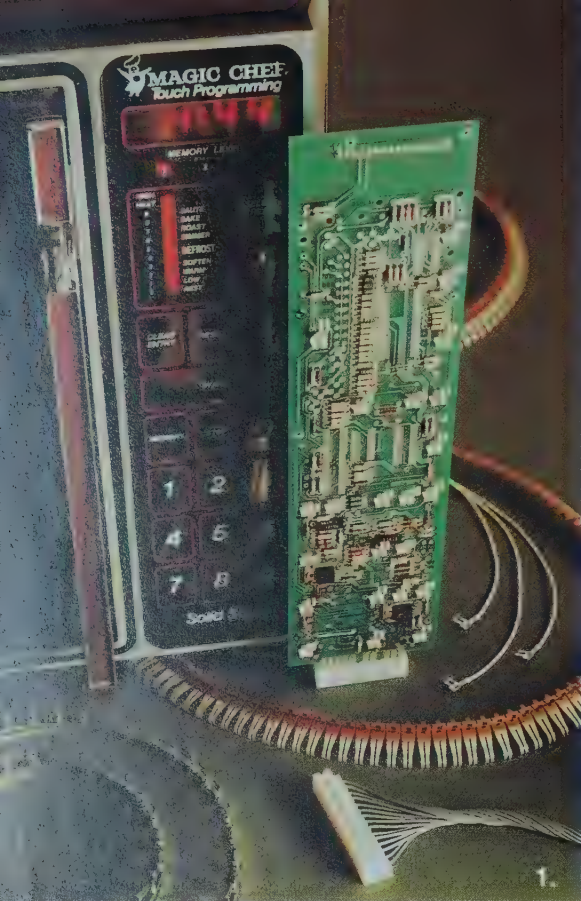
We have been providing connection products to IBM for over 25 years — becoming more involved in the design of each successive generation of computers. For example, the connectors shown here are some of the AMP products used in recent IBM business computers such as the Systems 32, 35, and 5100.

Data terminals have been an excellent source of AMP growth as they acquire greater capabilities and proliferate in use. While the Data 100 terminal shown here uses several AMP products internally, of particular interest is the use of AMP CPC (Circular Plastic Connectors) for the basic external Input/Output connections. The DFE Alpha 128 data terminal shown here uses a number of AMP products supplied by our German subsidiary and evidences

the participation of AMP connectors in the trend toward increased use of flexible flat cable.

To facilitate installation of their dictating equipment, the Lanier Corporation now uses our CHAMP connectors and board-mounted insulation displacement contacts. The installer uses a special AMP tool to attach the wires in the incoming cables to the board. The outgoing cable is connected by plugging the CHAMP cable connector to the mating board-mounted CHAMP header.





1. The solid-state electronic control board used in Magic Chef microwave ovens plugs into an AMP printed circuit edge connector. In addition, special AMP strip-form, machine-applied, spring contacts are installed on the board to link it to the "Touch Programming" front selection panel.
2. A variety of AMP products are used in the fast-growing electronic games market by leading producers such as Atari and Coleco. Many of these products are strip-form, reel-fed items applied by AMP machines.

All of the consumer goods products shown here — microwave ovens, electronic games, and VTR (video tape recorder) units — are relatively new markets for AMP products that have arisen in recent years. They are visible evidence of the growing role of electronics in our everyday lives.

We have been serving the appliance industry for over 30 years. The increasing use of electronic controls in microwave ovens, washers, dryers, and other appliances creates demand for AMP products not traditionally used in this field. For example, the solid-state control board in the Magic Chef microwave oven shown here plugs into an AMP printed circuit edge connector. In addition, special AMP spring contacts on the board provide the connections between the board and the "Touch Programming" selection panel on the front of the oven.



3. AMP products are used in various Video Tape Recording equipment both in the U.S. and abroad. This Sony U-Matic VTR uses many AMP "Tuning Fork" connectors supplied by our Japanese subsidiary.
4. This unique new AMP semi-automatic application machine uses the mass termination and insulation displacement techniques to provide customers with great labor savings in fabricating simple wire harnesses.



Consumer Goods

TV • Radio • Stereo • Tape Recorders • Organs • Ranges • Dishwashers
Refrigerators • Freezers • Washers • Dryers • Air Conditioners
Humidity Controls • Portable Heaters • Small Appliances • Power Tools
Garden Equipment • Vending and Amusement Equipment

The amazing surge in sales of electronic games in the past few years opens another good avenue of AMP growth to supplement our main areas of TV and appliances. We are working with the leading producers of both home video and coin-operated arcade games in the U.S. and abroad. Currently most of the AMP products used in this industry are standard strip-form items, such as those shown here, supplied on reels for rapid, low-cost application with AMP machines. With the trends toward programmable home games and complex, sophisticated arcade games, we see a definite potential for more advanced, specialized AMP products. For example, arcade games are beginning to use a variety of AMP printed circuit connectors, packaging devices, and switches.

AMP products are also appearing in video tape recorder equipment, both in commercial equipment and in consumer-oriented units. The SONY U-Matic VTR unit shown here uses many AMP Tuning Fork connectors supplied by our Japanese subsidiary. Now in its infancy, home VTR could be a major consumer market in the 1980's.

The AMP application machine shown here is part of our extensive work on the "mass termination" approach. A new generation of application equipment is being developed to offer dramatic labor savings to customers by combining into one operation the termination and

installation of wires into connector housings. The semi-automated version shown here is now in use in the TV and stereo industry. Fully automated versions are also available. Up to 15 wires are installed simultaneously into our Lace-N-Lok connectors by driving the wires into V-shaped slots that displace the insulation — producing an excellent electrical connection without stripping the wire.





1. AMP CPC (Circular Plastic Connectors) are now coming into use in the trucking and off-highway equipment industry — appearing, for example, on Steiger tractors and White trucks.

2. This fully automatic machine was developed by our Italian subsidiary to produce relatively simple, highly reliable automotive wiring harnesses. Part of the evolution to central electrical junctioning units, this unique machine uses mass termination and insulation displacement techniques to terminate and install a number of wires into connector housings at high production rates.

The long-term trend toward greater electrical and electronic content in vehicles continues — permitting us to increase the amount of AMP connection dollars per vehicle. This, along with higher unit production of vehicles, gave us a good recovery in this market in 1976.

The use of high-performance, more advanced connectors in trucks and off-highway equipment is a fairly recent phenomenon. As a result of the growing complexity of electrical systems, the addition of electronic devices, and the need for higher reliability, companies like Steiger Tractor and White Motor Corporation now have much higher level



3. In an important new development, AMP is beginning to supply the entire central electrical junctioning units now being installed in certain models of European cars. Shown above is a Fiat unit and below a VW unit.

4. A new type of connector developed by our French subsidiary provides both electrical connection and mechanical attachment of LITA spotlights to their bases or mounting tracks.



Transportation and Electrical Equipment

Automobiles • Trucks • Recreational Vehicles • Busses • Rail and Rapid Transit Equipment
Aircraft • Farm Equipment • Materials Handling Equipment • Motors and Generators
Compressors • Refrigeration, Heating and Air Conditioning Equipment
Lighting Equipment • Transformers • Switchgear • Coils and Relays

connection requirements. AMP products already being used in other industries, such as the CPC (Circular Plastic Connectors) shown here, are being extended into this field. Special adaptations, such as sealed and heavy-duty versions, are being provided to meet specific transportation industry needs.

One of the most significant trends in the European automotive and truck market is the evolution into a more advanced electrical system featuring a central junction box. AMP has been deeply involved in the development of central units that integrate certain electrical functions such as fuses and relays at one convenient point. After several years of extensive development work, we are now beginning to supply the entire central box unit, including the associated connectors, to customers such as Fiat, Seat, and

Volkswagen for use in certain models. We are very optimistic about our participation in this important trend.

In addition to development work on the Fiat central electrical unit, our Italian subsidiary also developed a fully automatic mass termination machine for producing simple automotive connector harnesses used with the central unit. This unique machine automatically installs a number of wires simultaneously into insulation displacement type connectors. By handling a number of wires together and combining terminating and installing of wires into one operation, the machine yields great labor savings over conventional methods.

Our French subsidiary recently developed an interesting new type of connector family for the LITA division of MAZDA, a leading French manufacturer of spotlights. These versatile connectors provide not only the electrical connection, but also the mechanical attachment of the spotlights to their base or mounting track. By using machine-applied contacts and standardization on only four different connectors, great savings in production and inventorying were realized. The lighting equipment industry has been a steady source of AMP growth through the years.





1. AMP internally fired splices being installed on a Southern California Edison power transmission line. In field evaluation tests of actual applied costs, AMP products were very favorably accepted over competitive products because of their speed and uniformity of application.
2. New AMP underground sealed distribution bus system for electric power distribution lines.
3. New AMP snap-in, one-piece connector for flexible metal conduit being demonstrated at an AMP electrical distributor, Dauphin Electric Company, in Harrisburg, PA.

Our sales to this broad category of essentially non-manufacturing customers have been true to form in recent years by being much less volatile than our other market categories — declining less during the recession, and recovering at a more modest rate in 1976. We continue to diversify our activities in this area — primarily through AMP Special Industries, our domestic marketing unit located at Valley Forge, Pennsylvania; and through our AMPLIVERSAL marketing organization in each international subsidiary.

The electric power line installation scenes show the use of AMP's internally fired splices in a field evaluation study conducted by the Southern California Edison Company. On an actual installation of a power transmission line,



4. New AMP Plyr-Tap terminals and ELECTRO-TAP splices offer several advantages in electrical maintenance and repair work. They require no wire stripping, cover wires from 14-22 gauge with only two sizes, and can be applied with an ordinary pliers.



Special Industries — Maintenance, Modernization, Utilities, Construction Fields

Airlines • Bus Lines • Trucking Companies • Railroads • Shipyards
Industrial Plant Maintenance • Repair Shops • Building Contractors • Mobile Homes
Federal, State & Local Government Installations • Telephone Companies
Electric Power Companies • Gas Companies • Resale Organizations

engineers performed an applied cost evaluation using the relatively new AMP splice and splices of a type the utility company had been using for years. AMP products were very favorably accepted because they can be installed so quickly and uniformly. After the prepared cable is inserted, an internal powder charge is actuated with a battery device — attaching the splice to the cable instantly. AMP splices are steadily gaining acceptance in the industry as their cost saving advantages become more evident.

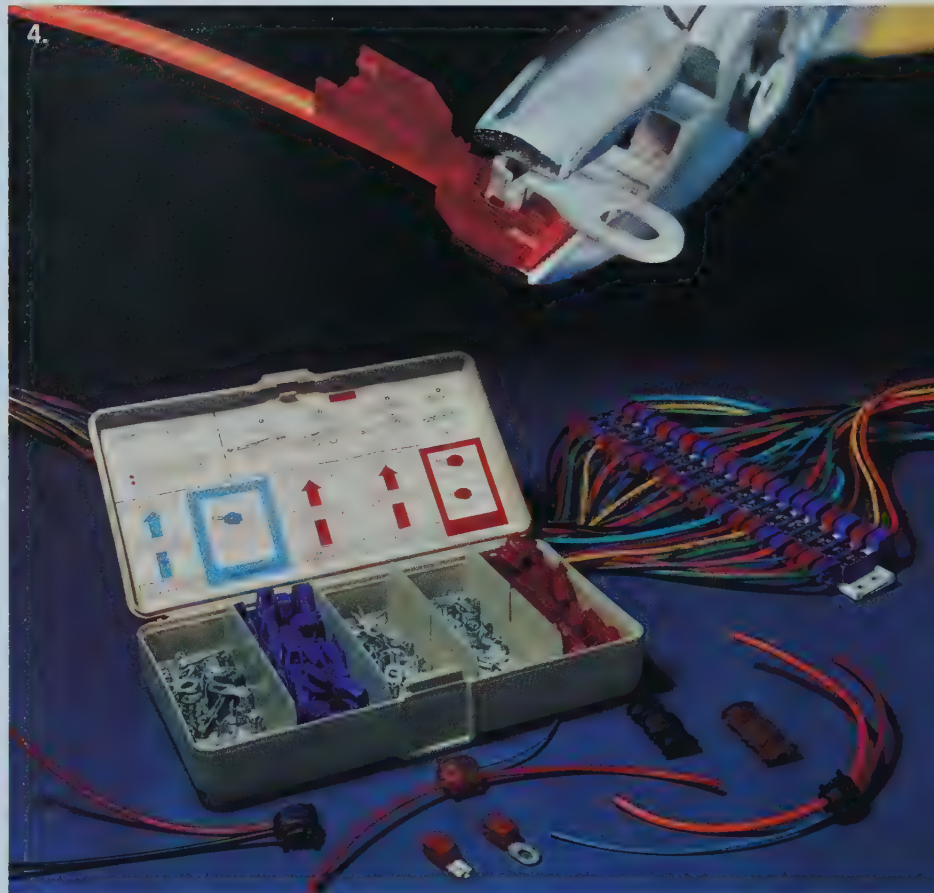
Continuing to offer unique, labor-saving connection devices to the utility industry, we recently developed the new underground distribution bus system shown here. Suitable for either enclosure or direct burial installation, a tightly sealed connection can be made quickly and reliably by using only an ordinary ratchet wrench.

For many years we have had several dozen distributors in less developed countries that do not warrant our direct coverage. In 1974 AMP Special Industries began a domestic distributor program to take AMP products into new markets not feasible to reach through our own direct selling organizations. While it may be some time before our sales are significant in this new area, we are making steady progress. We added over 150 electrical and electronics distributors in 1976 to bring our total to over 300.

An important new AMP product for electrical distributors is the flexible metal conduit "snap-in", one-piece connector shown here. Installed much faster than

conventional connectors, it requires no preparation of the conduit and has no separate bushings or lock nuts. It simply screws onto the conduit and snaps into the hole in the box.

Another new product family of potential interest to distributors as well as to AMP customers in many other markets is our Plyr-Tap terminals and ELECTRO-TAP splices. They require no pre-stripping of the wire, are applied with an ordinary pliers, and cover a wide range of wire sizes from 14 to 22 gauge.



Product Review

- A record \$47,000,000 — 9% of sales revenues — was spent on "R.D.&E." for the creation and application of new and improved products and processes.
- ✱ Nearly 2,000 employees — scientists, engineers and support personnel — and 600,000 sq. ft. of floor space are involved in AMP's total technical efforts.
- ✱ Over 2,000 U.S. patents were issued or pending at year-end 1976 — with over 7,400 corresponding patents in over 40 other countries.

A record \$47,000,000 (9% of our sales dollars) was spent on research, development, and engineering for the creation and application of new and improved products and processes in 1976 — an increase of \$8,000,000 over 1975.

As in prior years, we found no shortage of new product opportunities. The problem, as usual, is to choose which are best suited to our capabilities and offer the best growth, profit, and return

on investment. We continue to concentrate our primary efforts on the field of electrical and electronic connection devices. Working closely with customers' advanced development programs, we are deeply involved in basic trends in our industry — providing new types of connections for micro-processor units, multi-layer printed circuitry, flat flexible cable and circuitry, and fiber optic systems, for example. This activity calls for increasingly higher levels of skills, building on years of experience, and more sophisticated equipment, such as the scanning electron microscope shown here.

1. This extremely high resolution, scanning electron microscope recently installed in our Research Department displays 3-dimensional relief pictures of a greatly magnified surface, and analyzes the presence of various elements. It adds significantly to our research capabilities in such areas as contact phenomena, surface wear, corrosion, metal plating, and adhesives.
2. This machine is a combination of a standard AMP-O-LECTRIC semi-automatic machine and a unique, new, operator-assist feeding mechanism. Named the Single Wire Attach Terminal (S.W.A.T.) machine, it gives a dramatic increase in productivity. Using an AMP-O-LECTRIC machine alone, an operator must somewhat precisely place each wire into position for crimping. With this feeding mechanism, the operator merely drops wires into the V-shaped entry area and wires are terminated at rates that are several times faster. Both open and closed barrel terminals can be applied at rates of over 3,000 per hour.
3. Some of the latest AMP electronic packaging devices — sockets, receptacles, chip carriers, etc. — for microcircuitry connections.



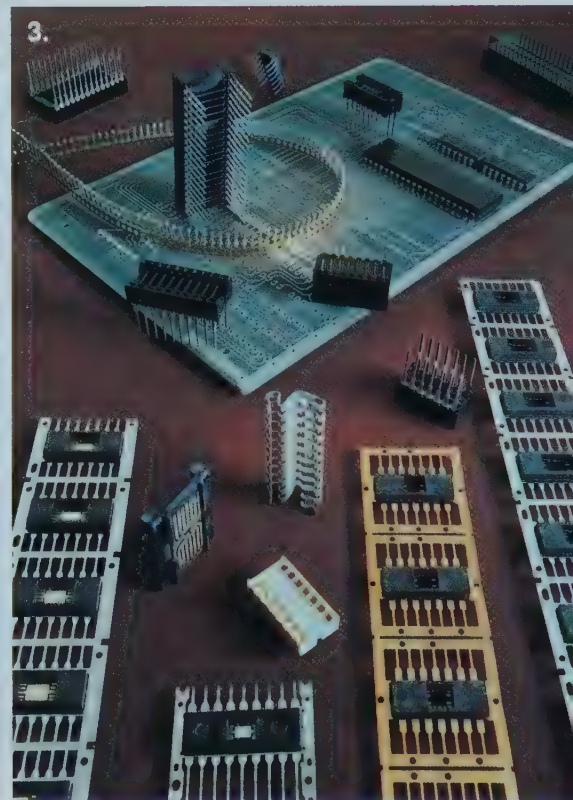
An integral part of our solving customer connection problems is the appropriate application tooling. This can range from designing new products that require no special tools — such as the Plyr-Tap terminals and URD connectors on pages 16 and 17 that use ordinary pliers or wrenches — to unique, high-speed equipment.

The new machines shown here and on pages 13 and 14 offer tremendous labor savings over existing methods and are a distinct advance in the “state of the art” of rapid termination of wires and cables. By simplifying the motions required of the operator, the wire feeding mechanism

shown on this page can increase the termination rate of AMP semiautomatic bench application machines by several times. Similarly, the mass termination machines on pages 13 and 14 offer dramatic labor savings through the elimination of certain labor intensive operations by handling a number of wires simultaneously, and by combining into one operation the termination of wires and their installation into connectors.

Supplementing our primary concentration on connection devices, we continue to gradually diversify into closely related areas that use our same basic

capabilities in product development, manufacturing and marketing. We are pushing further into other electrical, electronic, or mechanical component areas such as conduit connectors, switches, programming devices, power supplies, heat shrink materials, and RF filters. While still a very modest part of our total business, they definitely offer worthwhile avenues of growth when pursued in a careful, selective manner.



Product Review

1. Some of the latest miniature AMP switches for printed circuit board applications. Continuing to innovate in switch designs, we are steadily broadening our scope in this related product area as a logical extension of our basic capabilities.

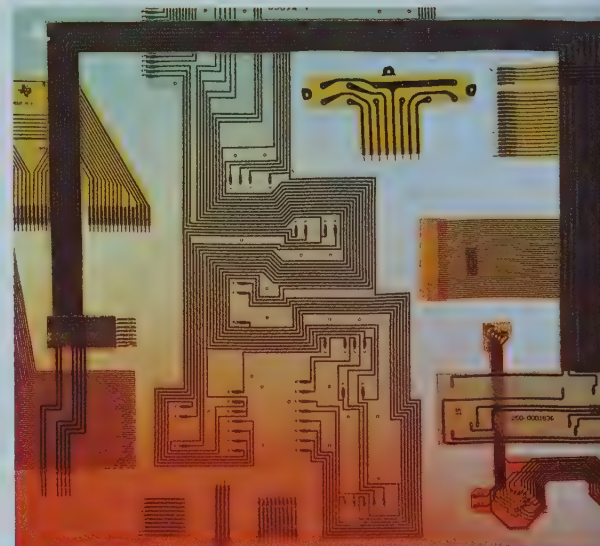
2. AMP fiber optic connectors now available include single and multiple position versions for both single fiber and bundled fiber cables. We are intensifying our development work in this important new area — working closely with leading fiber optic cable producers and with many AMP customers who are exploring the use of fiber optics in their equipment.

3. These small new filters are part of a growing family of AMP RF filters designed to preserve the signal purity of circuits and protect them from undesirable extraneous effects.

4. Some of the most recent versions of AMP flexible cable and circuitry.

5. New AMP card readers — Above is a versatile unit that reads both the thicker plastic punched hole cards and the thinner standard tabulating cards. Used in data collection systems in hospitals, it can also be adapted to many other systems where this dual card reading ability is desired. Below is a motor driven magnetic stripe reader used in banking terminals and other systems where both data recording and reading are required.

6. Recently developed AMP power supply units for various aerospace and military projects. Meeting very precise, demanding requirements on voltage, current, size, weight and other characteristics, these high performance units are used in avionic and shipboard electronic equipment.





7. AMP heat shrink insulation materials include both standard versions and special applications such as truck battery cable assemblies. When heated, these materials shrink tightly around the object to be protected.

8. This new AMP-FIT PAK provides the tools and fittings needed to install and repair pressure systems on pressurized telephone transmission cables. AMP-FIT crimpable tube fittings are finding growing acceptance in the telephone, gas, and other industries.

Combined Statements of Income and Retained Earnings

AMP Incorporated and Pamcor, Inc. & their subsidiaries

Year Ended December 31,
1976 1975

Earnings for the Year	Net Sales	\$522,016,000	\$409,551,000
	Cost of Sales	<u>309,843,000</u>	<u>259,211,000</u>
	Gross income	212,173,000	150,340,000
	Selling, General and Administrative Expenses ...	<u>109,658,000</u>	<u>90,464,000</u>
	Income from operations (after deducting depreciation of \$23,987,000 and \$21,740,000)	102,515,000	59,876,000
	Interest Expense	(7,711,000)	(9,550,000)
	Other Income, net	<u>2,746,000</u>	<u>1,775,000</u>
	Income before income taxes	97,550,000	52,101,000
	Income Taxes	<u>45,510,000</u>	<u>25,100,000</u>
	Net Income	<u>\$ 52,040,000</u>	<u>\$ 27,001,000</u>
	<i>Net Income Per Endorsed Share</i>	<i>\$1.40</i>	<i>\$.73</i>
	<i>(weighted average)</i>		
Earnings Retained	Retained Earnings, Beginning of Year	\$235,820,000	\$222,531,000
	Add —		
	Net income	52,040,000	27,001,000
	Less —		
	Cash dividends on common stock (41¢ and 37¢ per Endorsed Share)	<u>15,198,000</u>	<u>13,712,000</u>
	Retained Earnings, End of Year	<u>\$272,662,000</u>	<u>\$235,820,000</u>

Notes to Combined Financial Statements

1. Summary of Accounting Principles

Principles of Combination — The financial statements of AMP and Pamcor and their subsidiaries (all wholly owned) are combined, as each company is owned beneficially by identical shareholders. Intercompany and affiliated company accounts and transactions are eliminated in the combination.

Translation of International Operations — On January 1, 1976 the Company made the required changes in its method of accounting for translation of foreign currency transactions and financial statements to conform with Financial Accounting Standard No. 8. In accordance with the provisions of this standard, the change has been applied retroactively, and accordingly, the results of operations of all prior years have been appropriately restated.

The change in method had its principal impact upon the Company's method of valuing inventories (historical rates versus current rates) and in the recognition of unrealized net translation gains (immediate recognition versus deferral until realized).

The accounting change increased Retained Earnings at January 1, 1975 by \$981,000 and its effect upon the results of operations for the two years ended December 31, 1976 was to reduce net income by approximately \$1,700,000 (5¢ per share) in 1976 and

Combined Statements of Changes in Financial Position

AMP Incorporated and Pamcor, Inc. & their subsidiaries

Year Ended December 31,
1976 **1975**

Working Capital was provided from	Net income.....	\$ 52,040,000	\$ 27,001,000
	Expenses not requiring current outlay of working capital —		
	Depreciation.....	23,987,000	21,740,000
	Deferred income taxes.....	3,761,000	3,161,000
	Other.....	1,252,000	544,000
		81,040,000	52,446,000
	Additions to long-term debt.....	2,713,000	31,991,000
	Additions to other capital.....	164,000	943,000
	Miscellaneous sources, net.....	8,048,000	5,108,000
		91,965,000	90,488,000
Working Capital was used to	Increase investments and other assets.....	234,000	1,575,000
	Acquire property, plant and equipment.....	20,240,000	23,128,000
	Reduce long-term debt.....	5,167,000	6,002,000
	Purchase treasury stock.....	5,102,000	—
	Pay cash dividends.....	15,198,000	13,712,000
		45,941,000	44,417,000
Working Capital Increased		<u>\$ 46,024,000</u>	<u>\$ 46,071,000</u>
Working Capital Changes — Increases (Decreases)	Cash, time deposits and marketable securities...	\$ 44,151,000	\$ 35,579,000
	Receivables.....	19,267,000	(12,705,000)
	Inventories.....	5,957,000	(28,635,000)
	Other current assets.....	476,000	(4,681,000)
	Bank loans and other current debt.....	4,736,000	51,547,000
	Accounts payable and accrued expenses.....	(8,843,000)	(4,120,000)
	Accrued taxes on income.....	(21,639,000)	10,229,000
	Current portion of long-term debt.....	1,919,000	(1,143,000)
	Increase in working capital.....	<u>\$ 46,024,000</u>	<u>\$ 46,071,000</u>

\$800,000 (2¢ per share) in 1975. For these years the effect of the change in method is approximately the same before and after income taxes because income taxes related to these adjustments are not significant.

Inventories — Inventories, which consist of material, labor and overhead, are stated at the lower of cost, principally average, or market.

Property, Plant and Equipment and Depreciation — Property, plant and equipment is stated at cost. Depreciation is computed by applying principally the straight-line method to individual items. Where accelerated depreciation methods are used for tax purposes, deferred income taxes are recorded. Investment tax credits are apportioned over the productive life of the equipment for which they were granted.

Maintenance and repairs are charged to expense as incurred. Major repairs and improvements are capitalized and depreciated at applicable straight-line rates. Dies, small tools and accessories are charged to expense.

The cost and accumulated depreciation of items of plant and equipment retired or otherwise disposed of are removed from the related accounts, and any residual values are generally charged or credited to income.

Combined Balance Sheets

AMP Incorporated and Pamcor, Inc. & their subsidiaries

Assets		December 31,	
		1976	1975
Current Assets	Cash	\$ 7,422,000	\$ 4,743,000
	Time deposits	16,653,000	12,270,000
	Marketable securities, at cost, which approximates market	74,092,000	37,003,000
	Receivables, less reserves of \$2,846,000 and \$2,637,000	101,647,000	82,380,000
	Inventories —		
	Finished goods and work in process	51,792,000	47,433,000
	Purchased and manufactured parts	36,575,000	36,972,000
	Raw materials	26,624,000	24,629,000
	Total inventories	114,991,000	109,034,000
	Other current assets	8,483,000	8,007,000
	Total current assets	323,288,000	253,437,000
Investments and Other Assets	Investments and other assets	2,310,000	4,439,000
Property, Plant and Equipment	Land	7,799,000	7,673,000
	Buildings and leasehold improvements	78,999,000	78,715,000
	Machinery and equipment	133,457,000	127,162,000
	Machines and tools with customers	53,914,000	52,372,000
		274,169,000	265,922,000
	Less — Accumulated depreciation	124,751,000	108,095,000
	Property, plant and equipment, net	149,418,000	157,827,000
Total Assets		\$475,016,000	\$415,703,000

Notes (Continued)

2. Pamcor

Pamcor and its subsidiaries have no affiliates other than AMP and its subsidiaries. By trust agreement, Bankers Trust Company holds all of the Pamcor common stock for the benefit of AMP Incorporated common shareholders whose certificates are endorsed to show they are entitled to a proportionate interest in the Pamcor common stock held in the Trust. This interest is not transferable separately.

The inclusion of Pamcor resulted in an increase in net income of \$4,720,000 in 1976 and \$3,699,000 in 1975 after elimination of affiliated company profit in inventory.

3. International Operations

As a result of including the accounts of international operations, the combined financial statements include assets of \$158,916,000 (\$108,342,000 current) and liabilities of \$87,717,000 (\$66,166,000 current) at December 31, 1976, and assets of \$138,940,000 (\$86,503,000 current) and liabilities of \$80,248,000 (\$57,310,000 current) at December 31, 1975. The additional net income, as a result of including these international operations, amounted to \$20,197,000 in 1976 and \$11,366,000 in 1975.

Availability of remittances to the parent company is subject to exchange controls and other restrictions of the various countries.

As defined by Financial Accounting Standard No. 8, Exchange Gains and Losses, after adjustment for income taxes to the extent appropriate, increased net income by

Liabilities and Shareholders' Equity		December 31,	
		1976	1975
Current Liabilities	International bank loans	\$ 18,278,000	\$ 23,014,000
	Accounts payable	29,925,000	22,745,000
	Accrued payrolls and employee benefits	14,751,000	14,794,000
	Accrued taxes on income	46,867,000	25,228,000
	Accrued expenses — other	13,137,000	11,431,000
	Current portion of long-term debt	3,111,000	5,030,000
	Total current liabilities	126,069,000	102,242,000
Other Liabilities	Long-Term Debt	40,056,000	42,510,000
	Deferred Income Taxes	15,343,000	11,582,000
	Investment Tax Credit	4,015,000	3,656,000
	Other Liabilities and Deferred Credits	5,210,000	4,802,000
	Total other liabilities	64,624,000	62,550,000
Total Liabilities		190,693,000	164,792,000
Shareholders' Equity	AMP Incorporated —		
	Common stock, without par value —		
	Authorized 50,000,000 shares,		
	issued 37,440,000 shares	12,480,000	12,480,000
	Pamcor, Inc. —		
	Common stock, par value \$1.00 per share —		
	Authorized and issued, 20,000 shares	20,000	20,000
	Other capital	2,799,000	2,635,000
	Retained earnings	272,662,000	235,820,000
		287,961,000	250,955,000
	Less — Treasury stock, at cost	3,638,000	44,000
	Total shareholders' equity	284,323,000	250,911,000
Total Liabilities and Shareholders' Equity		\$475,016,000	\$415,703,000

\$489,000 in 1976 and \$411,000 in 1975. However, the total cumulative quantifiable effect of foreign currency rate changes on net income, including the effect of consuming in operations non-monetary assets translated to U.S. dollars at historical exchange rates (principally inventories charged to cost of sales on a first-in, first-out basis), decreased net income by approximately 9¢ per share in 1976 and 2¢ per share in 1975. Economic effects of foreign currency rate changes, such as changes in selling prices, sales volumes and cost structures are not quantifiable by practicable means.

4. Compensating Balances

Deposits supporting short-term borrowings were maintained throughout the year. Such balances were not legally restricted as to withdrawal. Short-term borrowing arrangements, for the most part, required balances expressed as an average over a period of time at 20% of usage and 10% of unused commitments. At December 31, 1976 the average balance required was \$3,800,000, of which approximately \$1,600,000 represented dual-purpose funds, in that these balances also constitute minimum operating balances and/or compensation for other bank services. The highest balances required during 1976 occurred at January 31, at which point average balances required would have approximated \$1,200,000 and \$3,200,000 related to outstanding borrowings and unused commitments, respectively.

Notes (Continued)

5. Current Debt

The average interest rate on total current bank debt outstanding was 12.3% at December 31, 1976 and 9.4% at December 31, 1975. During 1976, the highest aggregate current debt outstanding at any month end was \$25,004,000 at January 31 (1975 - \$72,348,000 at January 31). The 1976 average month-end aggregate current debt was \$19,396,000 (1975 - \$35,926,000) and the weighted average interest rate was 10.8% (1975 - 10.4%).

At year-end 1976 and 1975, unused lines of credit for short-term financing amounted to \$54,800,000 and \$65,500,000, respectively. As to the general terms of short-term borrowing arrangements, usage (along with provision for extension of maturities) is generally dependent upon the various companies maintaining a sound financial condition. There were no significant commitment fees on unused lines.

6. Long-Term Debt

At December 31, long-term debt was comprised of the following:

	1976	1975
8-5/8% Notes due 1985	\$ 25,000,000	\$ 25,000,000
6-1/2% Note due to institutional lender	—	2,000,000
International bank loans, 10.2% weighted interest rate (1975 - 9.4%), repayable in varying amounts from 1977 through 1984	14,814,000	17,116,000
Mortgages, 6.4% weighted interest rate (1975 - 6.3%), repayable through 1994, none fully repayable before 1978	3,353,000	3,424,000
	<u>43,167,000</u>	<u>47,540,000</u>
Less—		
Amount due within one year	<u>3,111,000</u>	<u>5,030,000</u>
	<u>\$ 40,056,000</u>	<u>\$ 42,510,000</u>

The 8-5/8% Notes are due April 1, 1985 and may not be redeemed prior to April 1, 1982. After that date the Notes will be redeemable at the option of the Company upon 30 days' notice, in whole or in part, at their principal amount plus accrued interest.

Unused commitments for long-term financing were not significant at December 31, 1976.

7. Stock Plus Cash Bonus Plan and Treasury Stock

All of the Endorsed Shares in the treasury (1976 - 449,993; 1975 - 348,970) are available for payment of stock bonuses under the incentive Stock Plus Cash Bonus Plan. The number of shares and cash (a fixed percentage of the value of the shares) distributed is determined by the appreciation in market value of the Company's stock.

During the year ended December 31, 1976 treasury stock was increased through the purchase of 157,650 shares costing \$5,102,000. Charges to income before income taxes for current and future distributions under the Plan totaled \$2,571,000 in 1976 and \$1,251,000 in 1975, and included shares and related costs, on a last-in, first-out basis, of 56,627 and \$1,508,000 in 1976 and 65,697 and \$69,000 in 1975.

For awards granted before and outstanding at December 31, 1976, and based on the market price as of that date, approximately 145,000 shares would be distributed in the years 1977 through 1982.

The effect upon Other Capital of distributions under the Stock Plus Cash Bonus Plan for the year ended December 31 was:

	1976	1975
Other Capital, beginning of year	\$ 2,635,000	\$ 1,692,000
Tax benefits on excess of fair market value over cost of treasury stock distributed	164,000	943,000
Other Capital, end of year	<u>\$ 2,799,000</u>	<u>\$ 2,635,000</u>

8. Employee Retirement Plans

The Company and its subsidiaries have various employee retirement plans. Provisions amounting to \$5,769,000 in 1976 and \$3,661,000 in 1975 were made to cover current service costs and amortization of past service costs, principally over 10 years. The increase in cost in 1976 resulted primarily from changes providing substantially increased benefits to employees covered by the largest retirement plan.

The Company's policy is to fund retirement plan costs as accrued. Unfunded retirement benefits for past service totaled approximately \$11,700,000 as of December 31, 1976. Also as of that date, the plans' assets were approximately equal to the present value of vested benefits.

9. Rental Expense and Lease Commitments

The Company leases some of its manufacturing and office buildings and certain equipment. Total rental expense was \$7,557,000 in 1976 and \$7,310,000 in 1975.

Minimum rental commitments under noncancelable leases (including some with option to buy) at December 31, 1976 were:

	Total Minimum Rental Commitments	Buildings	Transportation Equipment	Other Equipment
1977	\$3,888,000	\$1,011,000	\$1,580,000	\$1,297,000
1978	2,827,000	856,000	1,124,000	847,000
1979	1,106,000	645,000	318,000	143,000
1980	628,000	497,000	55,000	76,000
1981	381,000	325,000	—	56,000
1982-86	1,280,000	1,147,000	—	133,000
1987-91	706,000	706,000	—	—
1992-96	381,000	381,000	—	—
1997 and beyond . . .	—	—	—	—

For the years 1976 and 1975, noncapitalized financing leases (as that term is defined by the Securities and Exchange Commission) were not material.

10. Replacement Cost (Unaudited)

Reflecting the cumulative impact of inflation, there has been a continual increase in the cost of replacing long-lived assets such as plant and equipment, as well as in the cost of replacing inventories.

The Securities and Exchange Commission has issued a new rule (3-17 of Regulation S-X) requiring the computation and disclosure of certain replacement cost information for the Company's operations in certain parts of the world. The SEC, however, has cautioned investors and analysts against "simplistic use" of this information, and has pointed out that due to the subjective judgments and the many different specific factual circumstances involved, it will be subject to errors of estimation and will not be fully comparable among companies. Furthermore, the replacement costs developed do not indicate the "current value" for which assets could be sold.

Since this information is based on the hypothetical assumption that the Company would have replaced certain of its related inventory and productive capacity at December 31, 1976 (which it obviously did not do), the Company agrees that the effects thereof could not be predicted with precision, and as to some aspects, could not be estimated at all.

Reference is made to the Company's SEC Form 10-K (available on request) for additional information concerning replacement cost data and related methods of computation and implications. The SEC does not require, and the Company has not attempted, quantifying the total impact of inflation and changes in other economic factors on its business.

The SEC does not require that replacement cost data be presented in this Annual Report. However, a summary of the effect of the replacement cost data so estimated for assets and operations in North America, the European Economic Community, and Japan at December 31, 1976 was:

	Historical Costs as Reported	Replacement Costs (Unaudited)
Inventories	\$108,549,000	\$112,000,000
Plant and Equipment	\$254,963,000	\$394,000,000
Less - Accumulated Depreciation	119,818,000	207,000,000
Net Plant and Equipment	\$135,145,000	\$187,000,000

The effect of the estimates of replacement costs would be to increase total 1976 depreciation expense by approximately \$7,400,000. The related effect on cost of sales of depreciation (\$6,300,000) and other costs (\$800,000) would be to increase 1976 historical cost of sales of these operations by approximately \$7,100,000 or 2.4 percent.

While these higher replacement costs eventually result in increased depreciation expense and other costs, the Company has been able, in the past, to offset them through increased productivity resulting from technological and design changes, and adjustments to selling prices, and has been generally able to maintain its profit margins. Consequently, it is not known whether earnings reflecting replacement costs would be greater or less than earnings on a historical basis.

Notes (Continued)

11. Income Taxes

Components of income tax expense were:

	1976	1975
Taxes currently payable	\$ 41,025,000	\$ 22,034,000
Deferred taxes	4,126,000	2,670,000
Deferred investment tax credit	359,000	396,000
	<u>\$ 45,510,000</u>	<u>\$ 25,100,000</u>

Deferred income tax expense results from timing differences between tax and financial recognition of income and expense. The sources of these differences for the year ended December 31 were:

	1976	1975
Accelerated depreciation	\$ 1,252,000	\$ 3,193,000
Other	2,874,000	(523,000)
	<u>\$ 4,126,000</u>	<u>\$ 2,670,000</u>

United States income tax returns of AMP for the years 1963 through 1973 have been audited by the Internal Revenue Service and deficiencies assessed. The Company is contesting several items of these deficiencies, one of which could result in similar deficiencies of more substantial amounts being assessed for subsequent years. Accordingly, the Company has filed a petition with a U.S. District Court for refund of assessments paid for the years 1963 through 1965, and has filed a protest with the Internal Revenue Service for the years 1966 through 1973. In the opinion of the Company and outside tax counsel, the position taken by the Internal Revenue Service has little merit and the final determination of this issue for the years 1963 through 1976 will not have a materially adverse effect on its financial position or results of operations.

12. Research, Development and Engineering

Research, development and engineering expenditures for the creation and application of new and improved products and processes were \$47,000,000 in 1976 and \$39,000,000 in 1975.

13. Summarized Quarterly Financial Data (Unaudited)

1976	March 31	June 30	September 30	December 31
3 Months Ended:				
Net sales	\$115,016,000	\$130,596,000	\$132,847,000	\$143,557,000
Gross income	42,616,000	52,378,000	55,370,000	61,809,000
Net income	9,242,000	13,003,000	13,379,000	16,416,000
Earnings per endorsed share	25¢	35¢	36¢	44¢

Auditors' Report

To the Shareholders and Boards of Directors
of AMP Incorporated and Pamcor, Inc.:

We have examined the combined balance sheets of AMP INCORPORATED (a New Jersey corporation) and PAMCOR, INC. (an affiliated Puerto Rican corporation) and their subsidiaries as of December 31, 1976 and 1975 and the related combined statements of income and retained earnings, and changes in financial position for the years then ended. Our examinations were made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances. We did not examine the combined financial statements of certain international subsidiaries, which financial statements reflect 28% in 1976 and 1975 of the combined total assets and 31% in 1976 and 37% in 1975 of the combined net income. These financial statements were examined by other auditors whose report thereon has been furnished to us and our opinion expressed herein, insofar as it relates to the amounts included for these international subsidiaries, is based solely upon their report.

In our opinion, based upon our examinations and the report of other auditors, the combined financial statements referred to above present fairly the combined financial position of AMP Incorporated and Pamcor, Inc. and their subsidiaries as of December 31, 1976 and 1975 and the results of their combined operations and their combined changes in financial position for the years then ended, in conformity with generally accepted accounting principles applied on a consistent basis after giving retroactive effect to the change (with which we concur) to the required method of accounting for translation of foreign currency transactions and financial statements.

Arthur Andersen & Co.

Corporate Data

AMP INCORPORATED

HARRISBURG, PENNSYLVANIA 17105
Phone: 717-564-0100 TWX: 510-657-4110

Pamcor, Inc.
San Juan, Puerto Rico

Operating Subsidiaries

(all wholly owned and
included in combined results)

AMP Products Corporation,
Valley Forge, Pennsylvania

AMP of Canada, Ltd.,
Toronto, Canada

AMP S.A. Argentina,
Buenos Aires, Argentina

AMP do Brasil Ltda.,
São Paulo, Brazil

AMP de Mexico, S.A.,
Mexico City, D.F. Mexico

AMP Finland OY,
Helsinki, Finland

AMP de France,
Paris, France

AMP of Great Britain Limited,
London, England

AMP Italia S.p.A.,
Turin, Italy

AMP-Holland B.V.,
's-Hertogenbosch, The Netherlands

AMP Española, S.A.,
Barcelona, Spain

AMP Scandinavia A.B.,
Stockholm, Sweden

AMP A.G.,
Lucerne, Switzerland

AMP Deutschland G.m.b.H.,
Frankfurt, West Germany

Australian AMP Pty. Limited,
Sydney, Australia

AMP (Japan), Ltd.,
Tokyo, Japan

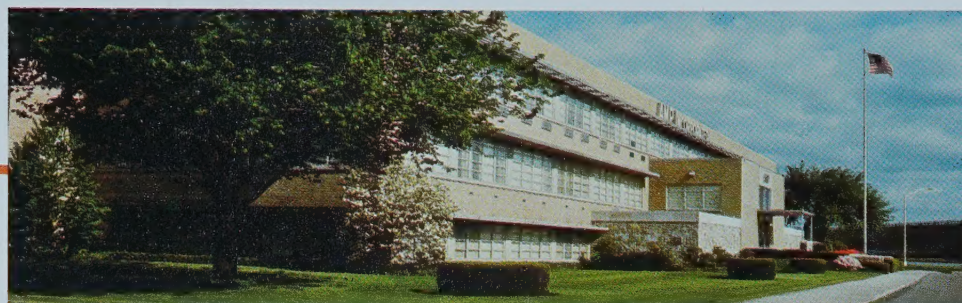
Auditors

Arthur Andersen & Co.
Price Waterhouse & Co.

Stock

Listed:
New York Stock Exchange

Shareholders:
7,903



AMP Headquarters — Eisenhower Blvd., Harrisburg, Pennsylvania

Officers

J. D. Brenner
President and Chief Executive Officer

Gerald F. Englehart
Vice President, International

Herman C. Haas
Vice President, Director of Merchandising

S. Wilson Pollock
Vice President, Engineering and Research

Walter F. Raab
Vice President and Treasurer

Willard A. Smith
Vice President, Manufacturing and
Product Planning

Clyde Rayburn
Controller

Hugo A. Walfred
Secretary and General Legal Counsel

Divisional Vice Presidents
(of AMP Incorporated only):

Marketing:

W. Bennett Conner
Industrial Sales

Oscar B. Rudolph
AMP Special Industries

Operations:

John E. Eberle
Manufacturing

James E. Marley
Automatic Machine Products

Harold A. McInnes
General Products

Kenneth L. Neijstrom
Special Products Development

Registrar

Bankers Trust Company
16 Wall Street,
New York, N.Y. 10015

Transfer Agents

Bankers Trust Company
16 Wall Street, New York, N.Y. 10015
The Continental Stock Transfer and Trust Co.
30 Montgomery St., Jersey City, N.J. 07302

Directors

Executive Committee:

C. J. Fredricksen
Chairman of the Board

J. D. Brenner
President and Chief Executive Officer

R. M. Brumfield
Chairman of Hurst Mfg. Corp.,
Princeton, Indiana,
Manufacturer of electrical motors
(Retired Chairman of Potter &
Brumfield Division, AMF Inc.)

F. H. Boland
Industrial and Financial Consultant,
Director of SIFE Trust Fund and
Madison Fund, Inc.

F. C. Hixon
Chairman,
Midland Investment Company,
San Antonio, Texas
Investments

Wilson D. Lewis
Chairman,
Dauphin Deposit Bank and
Trust Company, Harrisburg, PA

Walter F. Raab
Vice President and Treasurer

J. T. Simpson
Chairman and
Chief Executive Officer,
Harsco Corporation, Harrisburg, PA
Manufacturer of fabricated metal products

Willard A. Smith
Vice President, Manufacturing and
Product Planning

Director Emeritus:

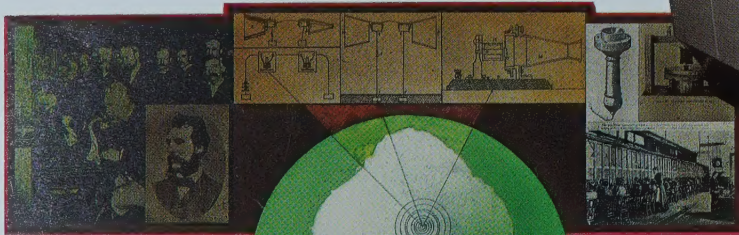
S. S. Auchincloss
Consultant to the Corporation,
Retired President of AMP Incorporated

Annual Shareholders' Meetings

The Annual Shareholders' Meetings of AMP Incorporated and Pamcor, Inc. are held the fourth Thursday of April. Formal notices, proxy statements and forms of proxy will be mailed on or about March 22, 1977 to shareholders of record on March 11, 1977 as to the April 28, 1977 meetings at 2:00 P.M. at 15 Exchange Place, Jersey City, New Jersey.

AMP has a better way

A new 1977 marketing program emphasizing that "AMP Has A Better Way" makes two basic points — the benefits to customers of early involvement of AMP in their design activities, and the installed cost savings available by using AMP application tooling. At right is one section of our new trade show exhibit that features pictures of famous scientists and inventors who found a "better way". Below are the first of a series of advertisements in Fortune and Business Week, and a new brochure detailing how AMP products and application equipment can help customers.



Bell's creative imagination was as important to the invention of the telephone and its development as his practicality.

Creative imagination and practicality are working for you at AMP.



AMP Marketing Organizations:

Domestic:

Industrial Sales Division,
Harrisburg, PA

Serves most U.S. original equipment manufacturers (OEM's).

Telecom Division,
Harrisburg, PA

Serves U.S. telecommunication OEM's and operating telephone companies.

Capitron Division,
Elizabethtown, PA

Markets special products (power supplies, card readers) to OEM's in the U.S.

AMP Special Industries,
Valley Forge, PA

Serves tens of thousands of U.S. customers such as industrial maintenance users, airlines, shipyards, mines, contractors, electric and gas utilities, resale organizations, and other special markets.

AMP of Canada, Ltd.,
Toronto, Canada

Serves all Canadian customers.

International:

14 subsidiaries in Latin America, Europe, and the Far East use the same basic AMP approach — each having an industrial marketing unit to serve OEM's and an AMPLIVERSAL division for the maintenance, utility, and other non-OEM markets.